

5/14/20

[Dart Hawkesbury] Job Sheet - Gagnon-Donovan, Michelle

4367



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D350-636-012
Job Sheet 177524

**Part No:** D350-636-012**Job Qty:** 1 ea**Part Name:** Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Part Weight:** 0 lbs**Status:** Scheduled**Priority:** Medium**Job Created:** 5/14/18**Job Tracking No:****Due Date:** 6/20/18**Created By:** Michelle Gagnon-Donovan**Type:** SOLD**Description:**

Note: DWG D3492 REV E SHEET 1, D2750-042 REV G SHEETS 1,2,5,9 IPP Rev:I 02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP Rev:K 06-07.13 As per dsi9343 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC IPP Rev:M 08-04-22 DD verified:EC IPP Rev:N 08-09-23 revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-010 DD verf:EC IPP Rev:P 10.06.22 revise seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH DDverf:EC IPP REV:R 13.08.27 PER ECN13-594 DD VERF:JLM

Ship Via:**Bill of Materials**

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S080772**Part:** D350-636-012**Job No:** 177524**Serial No/Batch:** S080772**Revision:****Inspector:****Exp Date:****Instructions:****Date:** 06/13/18

Plex 5/14/18 12:53 PM Dart.Gagnon.Michelle

Job Routing							
Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier
					Setup hrs	Run Hrs	
							Lead Time
							Sign-off
90	Start up Operation	1 Ea		6/20/18	0.00	0.00	Start Up Skidtubes-1
110	Skidtubes	1 pcs		6/20/18	0.00	4.36	Skidtubes-4
120	QC	1 pcs		6/20/18	0.00	0.00	QC10
130	QC	1 pcs		6/20/18	0.00	0.00	QC5
140	HandFinish	1 pcs		6/20/18	0.00	0.91	HandFinish1
150	QC	1 pcs		6/20/18	0.00	0.00	QC7-2
160	Skidtubes	1 pcs		6/20/18	0.00	4.36	Skidtubes-1
170	QC	1 pcs		6/20/18	0.00	0.00	QC10
180	QC	1 pcs		6/20/18	0.00	0.00	QC5
190	HandFinish	1 pcs		6/20/18	0.00	0.91	HandFinish2
200	SprayPaint	1 pcs		6/20/18	0.00	0.69	Spray Paint
205	Outsource	1 pcs		6/20/18			ATE003-VC
210	QC	1 pcs		6/20/18	0.00	0.00	QC14
230	HandFinish	1 pcs		6/20/18	0.00	0.91	HandFinish4
240	QC	1 pcs		6/20/18	0.00	0.00	QC5
250	Packaging	1 pcs		6/20/18	0.00	0.00	Packaging1-3
260	QC	1 pcs		6/20/18	0.00	0.00	QC4
265	DC	1 pcs		6/20/18	0.00	0.00	DC
270	Packaging	1 pcs		6/20/18	0.00	0.00	Packaging3-1
280	QC21-FG	1 Ea		6/20/18	0.00	0.00	QC21

Part Op 110 - 1- Pick D2600-3 Bent Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill jig DT8150 & Descriptions: DT8863A for second side only DT8863B for first side (detail K) 4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 7- Open up holes of Detail J to 0.297" (total of 2 holes per side) 8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 9- Grind welds flush as per Dwg D2750

160 - 1- Open up holes of Detail L using hole saw and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2- Open up holes of Detail K using hole saw to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float holes using uni-bit to .500" (4 per Side) 4- Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9) 5- Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7- Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: 135757 exp. date: 2018/12/31 ***ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9) A/R Aluminum Rod batch: 138884 9- At section AP-AP drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11- Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12- Deburr holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: 138862 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 138863

210 - Inspect for foreign object per QSI 024

230 - 1-Install inserts as per dwg D2750 2-Inspect for Foreign Objects 3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: 1138782 EXP DATE: 1862 4- assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: 1138842 5-Coat all exposed fasteners with "LPS Procyon" batch: 113365

265 - record fwd angle: Photocopy blue file and type labels per PPP D350-636-012 CHG 007

270 - Package as per PPP D350-636-012

Job BOM					004011
Part / Item	Component Name	Quantity	Operation	Container	
D2600-3-BENT-RH	Extrusion Bent RH	1 Ea (1 ea)	90-Start up Operation	5073308	
D2744	Cap	1 Ea (1 ea)	110-Skiddtubes	5063692	
D2739	350 I-Beam	1 Ea (1 ea)	160-Skiddtubes	5081150	
D2743	Crossbolt Spacer	8 Ea (8 ea)	160-Skiddtubes	5051803	
D3490-1	Cross Bolt Spacer	4 Ea (4 ea)	160-Skiddtubes	5065863	
D3490-3	Cross Bolt Spacer	4 Ea (4 ea)	160-Skiddtubes	5066254	
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-HandFinish	5058130	
AN3C5A	Bolt	34 Ea (34 ea)	230-HandFinish	5057152	
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	5076000	
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	5066333-1	
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	501137203	
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	5053252	
D3488-042	Blade Fitting RH	1 Ea (1 ea)	230-HandFinish	5070863	
D3492-1	Plug	8 Ea (8 ea)	230-HandFinish	5077552	
D3492-3	Plug	8 Ea (8 ea)	230-HandFinish	5072787	
D3535-25	Wearplate Center	1 Ea (1 ea)	230-HandFinish	5060747	
D3536-25	Gasket Center	1 Ea (1 ea)	230-HandFinish	5081731	
D3537-1	Wearpad	3 Ea (3 ea)	230-HandFinish	5070788	
D3631-1	Washer	8 Ea (8 ea)	230-HandFinish	5058407	
D3791-1	Wearpad	1 Ea (1 ea)	230-HandFinish	5059890	
D3793-1	Wearplate Fwd	1 Ea (1 ea)	230-HandFinish	5070803	
D3793-3	Wearplate Aft	1 Ea (1 ea)	230-HandFinish	5047272	
D3794-1	Gasket Fwd	1 Ea (1 ea)	230-HandFinish	5059818	
D3794-3	Gasket Aft	1 Ea (1 ea)	230-HandFinish	5046613	
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	5076089	
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	5034401	
NAS1149C0332R	Washer	38 Ea (38 ea)	230-HandFinish	5056497	
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	5038409-12	
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	5036711	
NAS1611-010	O-Ring	8 Ea (8 ea)	230-HandFinish	5022698	
NAS1611-013	O-Ring	8 Ea (8 ea)	230-HandFinish	5034467	
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging		
D2741	Replacement Blade	1 Ea (1 ea)	250-Packaging		
D3493-1	Washer	2 Ea (2 ea)	250-Packaging		
D3532-1	Spacer	2 Ea (2 ea)	250-Packaging		
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging		
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging		

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-RH	1	1	0
110-Skidtubes	D2744	1	86	0
160-Skidtubes	D2739	1	10	0
	D2743	8	86	0
	D3490-1	4	128	0
	D3490-3	4	107	0
230-HandFinish	ALS4-1032-225	38	5,407	0
	AN3C5A	34	1,858	0
	AN3C6A	4	266	0
	AN6C44A	4	351	0
	AN8C35A	1	47	0
	D2745	8	113	0
	D3488-042	1	14	0
	D3492-1	8	88	0
	D3492-3	8	87	0
	D3535-25	1	24	0
	D3536-25	1	31	0
	D3537-1	3	169	0
	D3631-1	8	931	0
	D3791-1	1	20	0
	D3793-1	1	30	0
	D3793-3	1	16	0
	D3794-1	1	21	0
	D3794-3	1	29	0
	MS21043-6	4	200	0
	MS21083C8	1	125	0
	NAS1149C0332R	38	5,536	0
	NAS1149C0832R	1	66	0
	NAS1515H3L	4	199	0
	NAS1611-010	8	569	0
	NAS1611-013	8	365	0
250-Packaging	AN8C21A	2	96	0
	D2741	1	87	0
	D3493-1	2	58	0
	D3532-1	2	40	0
	MS21083C8	2	125	0
	NAS1149D0863J	2	119	0
Part Specifications				
Specifications could not be found.				

Plex 5/14/18 12:53 PM Dart.Gagnon.Michelle

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN8C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL "F" SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

2 SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 177524

MAY 14 2018

RELEASED
2013-08-13

G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS $+0.010/-0.000$, WAS $+0.100/-0.000$ (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/5/6/7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413. QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-1/3-35 (ZN C8-1); D3794-1/3 REPLACES D3536-1/3-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/FT SADDLE REMOVED (B PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES. ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H3L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS. INCORPORATE DEO 91339157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2739 AND D2740	CP	98.11.18
B	CHANGE MS24894-S293 TO AN6-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MIN		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.07.11		

DART AEROSPACE USA, INC.

KENT, WA

DRAWING NO.

D2750

TITLE

350 SKIDTUBE ASSEMBLY

COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.

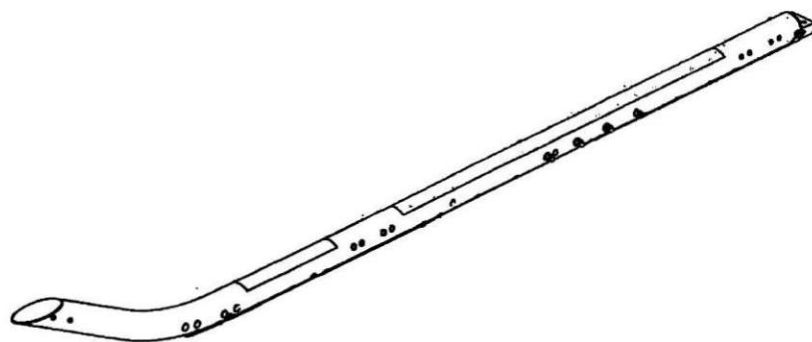
THIS DOCUMENT IS PRIVATE AND PROPRIETARY. NO REPRODUCTION OR DISSEMINATION OF THIS DOCUMENT IS PERMITTED WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE USA, INC.

REV. G

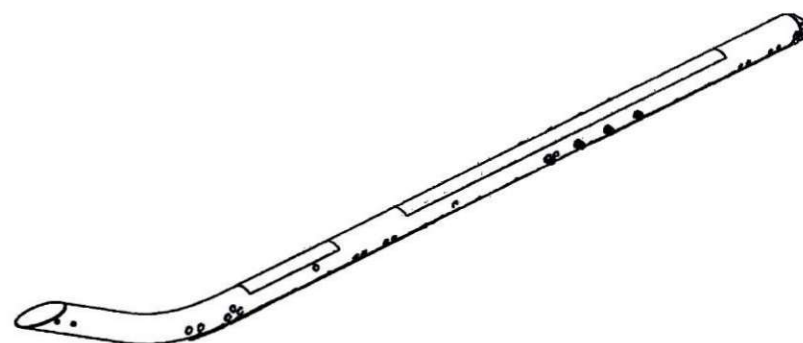
SHEET 1 OF 11

SCALE

NTS



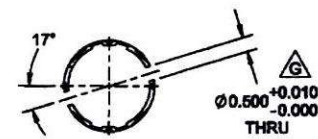
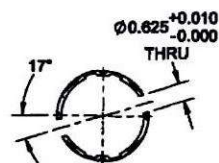
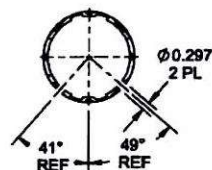
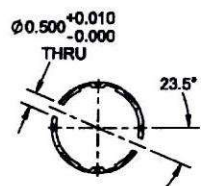
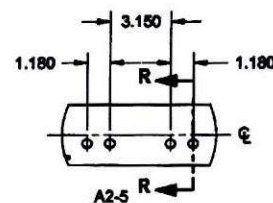
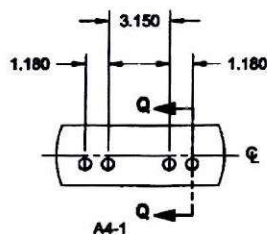
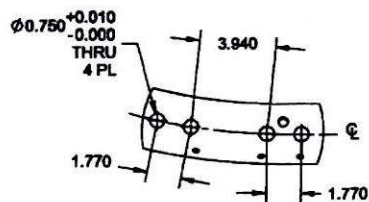
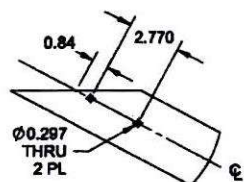
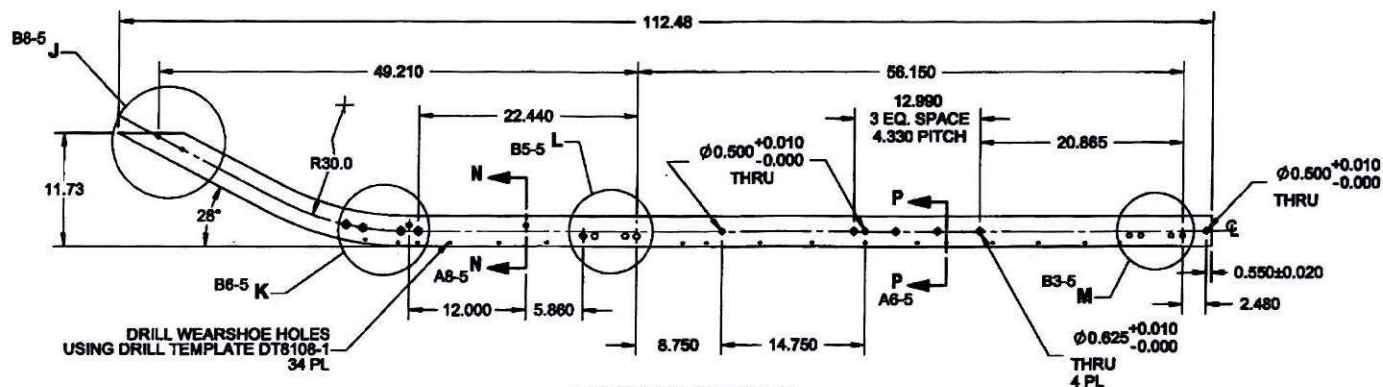
D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
2013-08-13
MD

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	<i>[Signature]</i>	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO. D2750	REV. G
MFG. APPR.	<i>[Signature]</i>	SHEET 2 OF 11	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	350 SKIDTUBE ASSEMBLY	NTS
DATE	13.07.11	COPYRIGHT © 1999 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND IS RELEASED ON THE CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER THAT WOULD BE DETRIMENTAL TO THE NATIONAL DEFENSE.	



RELEASED
2013-08-13

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO. D2750	REV. G
MFG. APPR.		SHEET 5 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	
DATE	13.07.11	NTS	

COPYRIGHT © 1988 BY DART AEROSPACE USA, INC.
THIS DOCUMENT IS UNCLASSIFIED, AND IS AVAILABLE TO THE PUBLIC WITHOUT LIMITATION.
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

8 7 6 5 4 3 2 1

D

C

B

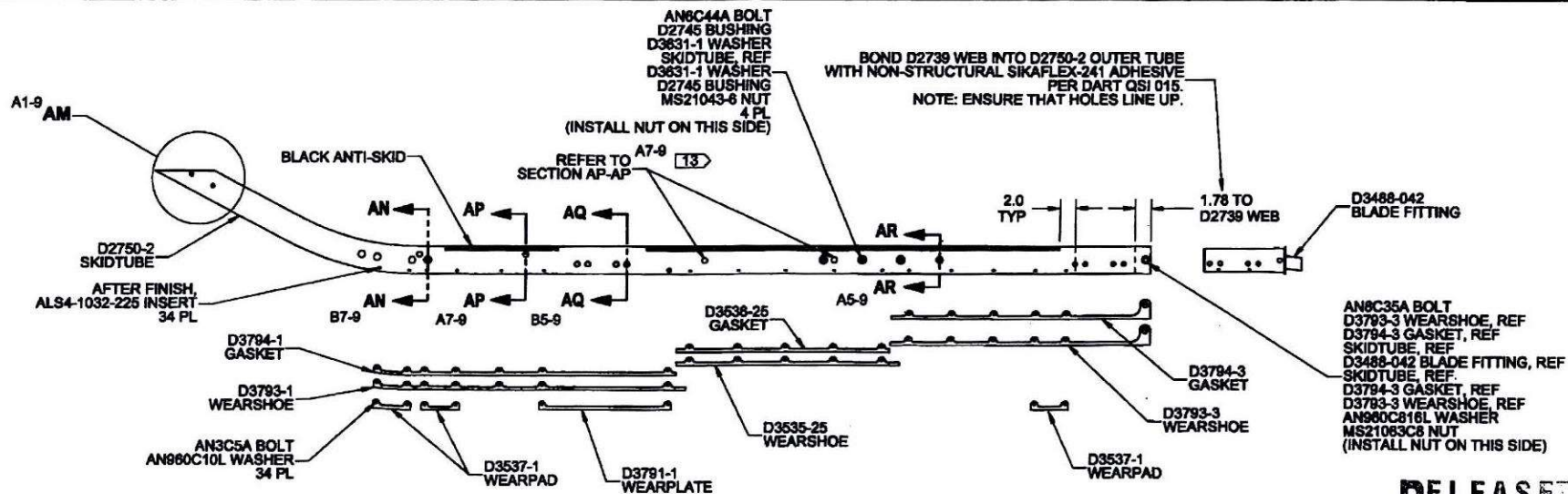
A

D

C

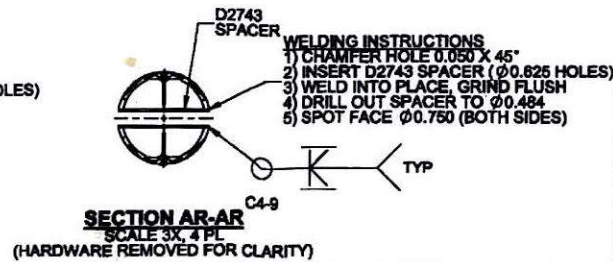
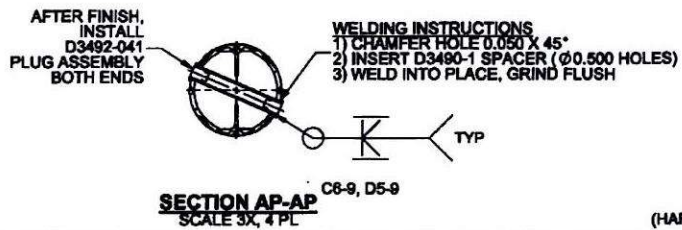
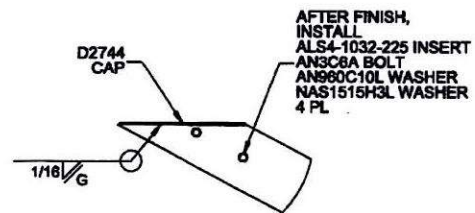
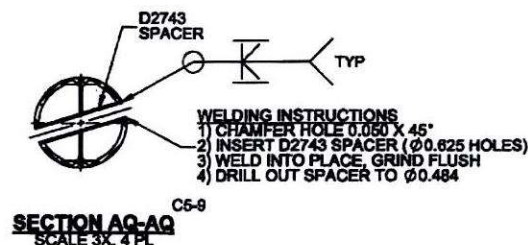
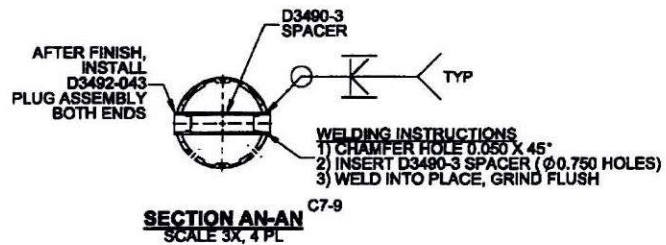
B

A



D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
2013-08-13



DESIGN	NM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO. D2750	REV. G
MFG. APPR.		SHEET 9 OF 11	
APPROVED		SCALE	
DE APPR.		350 SKIDTUBE ASSEMBLY	
DATE	13.07.11	NTS	

COPYRIGHT © 1988 BY DART AEROSPACE USA, INC.
THIS DOCUMENT IS UNCLASSIFIED AND IS NOT TO BE RELEASED OR DISCLOSED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE USA, INC.

8 7 6 5 4 3 2 1



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

Container View (Active) - Master Unit Containers

Master Unit No	Container No	Part No	Part Name	From Container	Current Location	Quantity
004055	S083767	AN8C21A	Bolt	fm137162	ST332	2
004055	S083766	D2741	Replacement Blade	s040883	ST538	1
004055	S083765	D3493-1	Washer	s067105	ST037	2
004055	S083764	D3532-1	Spacer	s062610	ST038	2
004055	S083763	MS21083C8	Nut	s050046	ST297	1
004055	S083768	MS21083C8	Nut	S050046	ST297	1
004055	S083762	NAS1149D0863J	Washer	f125635	ST263	2

Note: Ad hoc query view of Part.dbo.Container where Container.Active = 1.

Plex 6/25/18 10:37 AM dart.quirion.sonia

PAGE 1 OF 1

Description: SKIDTUBE STD LH/RH, FLOAT COMPATIBLE[illegible]